WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

a) input means for inputting image data;

b) first coding means for coding the input image data by transforming the input image data into frequency components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an intercoding mode;

c) second coding means for coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode; and

d) multiplexing means for outputting combined data obtained by combining the image data coded by said second coding means with the image data coded by said first coding means.

2. An image processing apparatus according to claim 1, wherein said second coding means performs coding on only direct-current components obtained by limiting said frequency components.

3. An image processing apparatus according to claim 1, wherein said first coding means and said second coding means use an MPEG-4 standard to code the image data.

4. An image processing apparatus according to claim 3, wherein said multiplexing means locates the image data coded by said second coding means in a user data area in a video plane object in a stream of the combined data output by said multiplexing means.

5. An image processing apparatus according to claim 1, wherein said multiplexing means combines the image data coded by said second coding means with a stream of the image data coded in the intercoding mode by said first coding means.

6. An image processing apparatus according to claim 1, wherein the image data coded by said second coding means is used as a reference image when the image data intercoded by said first coding means is decoded.

7. An image processing apparatus comprising:

a) input means for inputting image data;

b) first coding means for coding the input image data by transforming the input image data into frequency components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an intercoding mode;

c) second coding means for coding frequency components obtained by limiting said frequency components for image data obtained by performing local decoding on the image data coded by said first coding means; and

d) multiplexing means for outputting combined data obtained by combining the image data coded by said second coding means with the image data coded by said first coding means.

8. An image processing apparatus according to claim 7, wherein said second coding means performs coding on only direct-current components obtained by limiting said frequency components.

9. An image processing apparatus according to claim 7, wherein said first coding means and said second coding means use an MPEG-4 standard to code the image data.

10. An image processing apparatus according to claim 9, wherein said multiplexing means locates the image data coded by said second coding means in a user data area in a video plane object in a stream of the combined data output by said multiplexing means.

11. An image processing apparatus according to claim 7,

wherein said multiplexing means combines the image data coded by said second coding means with a stream of the image data intercoded by said first coding means.

12. An image processing apparatus according to claim 7, wherein the image data coded by said second coding means is used as a reference image when the image data coded in the intercoding mode by said first coding means is decoded.

13. An image processing apparatus comprising:

a) input means for inputting coded image data obtained by performing transformation into frequency components in units of blocks and coding the frequency components by adaptively using an intracoding mode and an intercoding mode, and pseudo-coded reference data obtained by coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode;

b) first decoding means for decoding the coded image data input by said input means; and

c) second decoding means for decoding the pseudo-coded reference data input by said input means,

wherein, when a reference image is lost in decoding on the image data coded in the intercoding mode, said first decoding means uses, as the reference image, image data obtained such that said second decoding means decodes the

pseudo-coded reference data.

14. An image processing apparatus according to claim 13, further comprising error detecting means for performing error detection on the coded image data input by said input means, and when said error detecting means detects an error in a frame of the input coded image data, said error detecting means skips over the error-detected frame.

15. An image processing apparatus according to claim 13, wherein the pseudo-coded data of reference is located in a stream of image data which is coded in the intercoding mode by using corresponding reference image data.

16. An image processing apparatus according to claim 13, wherein:

said input means inputs motion-vector data used in coding in the intercoding mode; and

when the reference image is lost in decoding on the image data coded in the intercoding mode, said first decoding means uses, as the reference image, image data which is based on the input motion-vector data and which is obtained such that said second decoding means decodes the pseudo-coded reference data.

17. An image processing apparatus according to claim 13, wherein the coded image data input by said input means is image data coded in an MPEG-4 standard.

18. An image processing method comprising:

a) an input step of inputting image data;

b) a first coding step of coding the input image data by transforming the input image data into frequency components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an intercoding mode;

c) a second coding step of coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode; and

d) a multiplexing step of outputting combined data obtained by combining the image data coded in said second coding step with the image data coded in said first coding step.

19. An image processing method comprising:

a) an input step of inputting image data;

b) a first coding step of coding the input image data by transforming the input image data into frequency components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an

intercoding mode;

c) a second coding step of coding frequency components obtained by limiting said frequency components for image data obtained by performing local decoding on the image data coded in said first coding step; and

d) a multiplexing step of outputting combined data obtained by combining the image data coded in said second coding step with the image data coded in said first coding step.

20. An image processing method comprising:

a) an input step of inputting coded image data obtained by performing transformation into frequency components in units of blocks and coding the frequency components by adaptively using an intracoding mode and an intercoding mode, and pseudo-coded reference data obtained by coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode;

b) a first decoding step of decoding the coded image data input in said input step; and

c) a second decoding step of decoding the pseudo-coded reference data input in said input step,

wherein, when a reference image is lost in decoding on the image data coded in the intercoding mode, in said first decoding step, image data obtained by decoding the pseudo-

coded reference data in said second decoding step is used as the reference image.

21. A computer-readable recording medium containing computer program code comprising:

a) an input step code of inputting image data;

b) a first coding step code of coding the input image data by transforming the input image data into frequency components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an intercoding mode;

c) a second coding step code of coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode; and

d) a multiplexing step code of outputting combined data obtained by combining the image data coded by said second coding step code with the image data coded by said first coding step code.

22. A computer-readable recording medium containing computer program code comprising:

a) an input step code of inputting image data;

b) a first coding step code of coding the input image data by transforming the input image data into frequency

components in units of blocks and coding said frequency components by adaptively using an intracoding mode and an intercoding mode;

c) a second coding step code of coding frequency components obtained by limiting said frequency components for image data obtained by performing local decoding on the image data coded by said first coding step code; and

d) a multiplexing step code of outputting combined data obtained by combining the image data coded by said second coding step code with the image data coded by said first coding step code.

23. A computer-readable recording medium containing computer program code comprising:

a) an input step code of inputting coded image data obtained by performing transformation into frequency components in units of blocks and coding the frequency components by adaptively using an intracoding mode and an intercoding mode, and pseudo-coded reference data obtained by coding frequency components obtained by limiting said frequency components for reference image data for use in the intercoding mode;

b) a first decoding step code of decoding the coded image data input by said input step code; and

c) a second decoding step code of decoding the pseudo-

coded reference data input by said input step code,

wherein, when a reference image is lost in decoding on the image data coded in the intercoding mode, image data obtained by decoding the pseudo-coded reference data in said second decoding step is used as the reference image by said first decoding step code.